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EXAMINER	
SMITH, JOSHUA Y	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/727,360	MISAWA ET AL.	
	Examiner	Art Unit	
	JOSHUA SMITH	2419	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on 26 May 2009.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 1-10,13-15,17-23,26-31,40-45,47-55,58-67,69,75 and 76 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) 5,6 and 27-31 is/are allowed.

6)☒ Claim(s) 1-4,7-10,13-15,17-23,26,40-45,47-55,58-67,69,75 and 76 is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 05/26/2009 has been entered.

- **Claims 1-10, 13-15, 17-23, 26-31, 40-45, 47-55, 58-67, 69, 75 and 76 are pending.**
- **Claims 11, 12, 16, 24, 25, 32-39, 46, 56, 57, 68 and 70-74 are cancelled.**
- **Claims 5, 6, 7/6, 27, 28, 29, 30, 31, 69/27 and 76/30 are allowed.**
- **Claims 1-4, 7/2, 7/4, 8-10, 13-15, 17-23, 26, 40-45, 47-55, 58-67, 69/2, 69/13, 69/49, 69/59, 75, 76/18, 76/53 and 76/58 stand rejected.**

Claim Objections

2. **Claim 43** is objected to because of the following informalities: Claim 43 states "a second signal format which is **prior to** the layer 1 which is employed in the OVPN" (emphasis added by examiner), where it appears the words “prior to” appear to be a typographical error, and the words appear they should be replaced with ***prior utilized in***, or similarly altered. Appropriate correction is required.

Claim Rejections - 35 USC § 101

3. 35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 19, 21 and 75/19 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Claim 19 states “An OVPN **system** comprising … a plurality of converting **sections** … a retrieving **section** … a generating **section** … a **section** for employing the converting section for performing the alternate converting operation" (emphasis added by examiner). Each “section” may be software, and this causes Claims 19, 21 and 75/19 to be directed toward software, which is non-statutory subject matter and where software does not define any structural and functional interrelationships between the software and other claimed aspects of the invention which permit the functionality of the software to be realized.

Claim 64 is rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Claim 64 states “An OVPN **system** comprising … a plurality of converting **sections** " (emphasis added by examiner). Each “section” may be software, and this causes Claim 64 to be directed toward software, which is non-statutory subject matter and where software does not define any structural and functional interrelationships

between the software and other claimed aspects of the invention which permit the functionality of the software to be realized.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 19, 20, 21, 22/20 and 75 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 19 states “a retrieving section for detecting whether or not there is **a section** for performing the alternate converting operation" (emphasis added by examiner), and Claim 19 also states “**a section** for employing the converting section for performing the alternate converting operation” (emphasis added by examiner). This is indefinite since it is unclear whether both instances of “a section” refer to the same section, or whether each instance of “a section” is referring to a different section.

Claims 21 and 75/19 are rejected through Claim 19.

Claim 20 states “a retrieving section for detecting whether or not there is **a section** for performing the alternate converting operation" (emphasis added by examiner), and Claim 20 also states “**a section** for employing the converting section for performing the alternate converting operation” (emphasis added by examiner). This is

indefinite since it is unclear whether both instances of “a section” refer to the same section, or whether each instance of “a section” is referring to a different section.

Claim 22/20 is rejected through Claim 20.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1-4, 7/2, 7/4, 8, 9, 10, 69/2 and 75/1 are rejected under 35 U.S.C. 103(a) as being unpatentable over EP 1229692 in view of Morinaga et al. (Patent No.: US 6,785,263 B1) and Oguchi et al. (Pub. No.: US 2002/0067725 A1), hereafter referred to as the ‘692 reference, Morinaga, and Oguchi, respectively.

In regards to Claims 1 and 2, the ‘692 reference teaches in paragraph [0005], page 2, lines 40-43, 48-49 and 52-55, an optical transport network is intended to be a

multi-service network that supports a wide variety of layers including SDH STM-N, SONET, ATM, IP, as well as other formats, to provide a universal transport medium for high bandwidth services, where client signals are mapped into the payload area of a frame structure called an optical transport unit (OUT), and where the payload to be carried fro the client, i.e. the client signal, which may be ATM, SDH, STM-N, or IP, is mapped into an optical payload unit (OPU), and, in paragraph [0019], page 5, lines 50-55, and in Fig. 1, page 18, a node N1 (Fig. 1), a node SNA (Fig. 1), a node SNB (Fig. 1), and a node N1 (Fig. 1) at the edges a conventional SDH network (optical network, and a plurality of converting sections, which are disposed so as to correspond to plural different first signal formats, for converting a first signal format and a second signal format alternatively under conditions in which the first signal format is used by a user's device and a second signal format which is used in the network are different from each other, and a terminating device for containing the user's device).

The '692 reference fails to teach a registering section from the user's device for a first signal format type which is used in the user's device, a retrieving section for a first signal format type which corresponds to information in a user's device according to a calling connection request from a user's device by referring to the information which is registered by the registering section, and a selecting section for selecting a first signal format which is used by the user's device according to a result in the retrieving section when data is transported from the user's device, user's device joins an virtual private network, IP address of a user's device and a VPNID, and a notifying section for notifying

contents of a registration to other VPN terminating device which controls that same VPNID as the user's device.

Morinaga teaches in column 5, line 60 though column 6, line 6, and in column 7, lines 45-59, and in FIG. 2, Sheet 2 of 9, a H.323 protocol portion (item 33, FIG. 2), a CODEC (item 34, FIG. 2), and a call control portion (item 31, FIG. 2), that operate where a transmission format to be used in accordance with each user information of a calling side is registered as a circuit, and a CODEC to be used in accordance with each user information of the calling side is registered as the CODEC, and if the user information of a calling side is accompanied by ON flag in the target parameter setting table, the reference table of the user information of the calling side and communication method is looked up, so that the transmission format to be used as the communication method is decided (a registering section from the user's device for a first signal format type which is used in the user's device, a retrieving section for a first signal format type which corresponds to information in a user's device according to a calling connection request from a user's device by referring to the information which is registered by the registering section, and a selecting section for selecting a first signal format which is used by the user's device according to a result in the retrieving section when data is transported from the user's device). It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the invention of the '692 reference with the invention of Morinaga since Morinaga teaches a system that involves storing user information and transmission parameters, allowing the system of the '692 reference to

be able to adjust routing parameters that best serve a user's preferences or QoS requirements.

Oguchi teaches in paragraph [0065], [0067], [0083], [0085], and [0143], virtual routers having the same VPN-ID exchange routing information though a level-2 tunnel established between edge routers, which can involves a host having an IP address, and then generate routing tables for that VPN-ID (user's device joins an virtual private network, IP address of a user's device and a VPNID, and a notifying section for notifying contents of a registration to other VPN terminating device which controls that same VPNID as the user's device). It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the invention of the '692 reference with the invention of Oguchi since Oguchi provides a method of establishing a virtual network and distributing the necessary information to establish and maintain such a virtual network, allowing the optical network of the '692 reference to provide optical VPN services to customers and provide the privacy, robustness, and cost effectiveness of virtual private networks.

In regards to Claims 3 and 4, the '692 reference teaches in paragraph [0005], page 2, lines 40-43, 48-49 and 52-55, an optical transport network is intended to be a multi-service network that supports a wide variety of layers including SDH STM-N, SONET, ATM, IP, as well as other formats, to provide a universal transport medium for high bandwidth services, where client signals are mapped into the payload area of a frame structure called an optical transport unit (OUT), and where the payload to be

carried fro the client, i.e. the client signal, which may be ATM, SDH, STM-N, or IP, is mapped into an optical payload unit (OPU), and, in paragraph [0019], page 5, lines 50-55, and in Fig. 1, page 18, a node N1 (Fig. 1), a node SNA (Fig. 1), a node SNB (Fig. 1), and a node N1 (Fig. 1) at the edges a conventional SDH network (optical network, and a plurality of converting sections, which are disposed so as to correspond to plural different first signal formats, for converting a first signal format and a second signal format alternatively under conditions in which the first signal format is used by a user's device and a second signal format which is used in the network are different from each other, and a terminating device for containing the user's device).

The '692 reference fails to teach a registering section from the user's device for a first signal format type which is used in the user's device, a retrieving section for a first signal format type which corresponds to information in a user's device according to a calling connection request from a user's device by referring to the information which is registered by the registering section, and a selecting section for selecting a first signal format which is used by the user's device according to a result in the retrieving section when data is transported from the user's device, a receiving and selecting section which receives a first signal format type information which is used in a device which receives a calling connection request from another VPN terminating device so as to respond to a notice from the notifying section and selects a first signal format type which is used in a user's device according to a format type information, user's device joins an virtual private network, IP address of a user's device and a VPNID, and a notifying section for

notifying contents of a registration to other VPN terminating device which controls that same VPNID as the user's device.

Morinaga teaches in column 5, line 60 though column 6, line 6, and in column 7, lines 45-59, and in FIG. 2, Sheet 2 of 9, a H.323 protocol portion (item 33, FIG. 2), a CODEC (item 34, FIG. 2), and a call control portion (item 31, FIG. 2), that operate where a transmission format to be used in accordance with each user information of a calling side is registered as a circuit, and a CODEC to be used in accordance with each user information of the calling side is registered as the CODEC, and if the user information of a calling side is accompanied by ON flag in the target parameter setting table, the reference table of the user information of the calling side and communication method is looked up, so that the transmission format to be used as the communication method is decided (a registering section from the user's device for a first signal format type which is used in the user's device, a retrieving section for a first signal format type which corresponds to information in a user's device according to a calling connection request from a user's device by referring to the information which is registered by the registering section, and a selecting section for selecting a first signal format which is used by the user's device according to a result in the retrieving section when data is transported from the user's device).

Morinaga also teaches in column 5, lines 42-47 and 53-56, and in FIG. 2, Sheet 2 of 9, the central office line board (item 40, FIG. 2) is controlled by the central office line driver (item 39, FIG. 2), and the signal that the central office line driver transmits to or receives from the circuit exchange PBX1 via the central line office is processed by

the switched circuit control portion (item 35, FIG. 2), and a signal that each of the LAN circuit drivers (item 37, FIG. 2) transmits or receives from the local area network via a LAN circuit board (item 38, FIG. 2) is processed by the LAN control portion (item 36, FIG. 2) (a receiving and selecting section which receives a first signal format type information which is used in a device which receives a calling connection request from another VPN terminating device so as to respond to a notice from the notifying section and selects a first signal format type which is used in a user's device according to a format type information). It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the invention of the '692 reference with the invention of Morinaga since Morinaga teaches a system that involves storing user information and transmission parameters, allowing the system of the '692 reference to be able to adjust routing parameters that best serve a user's preferences or QoS requirements.

Oguchi teaches in paragraph [0065], [0067], [0083], [0085], and [0143], virtual routers having the same VPN-ID exchange routing information though a level-2 tunnel established between edge routers, which can involves a host having an IP address, and then generate routing tables for that VPN-ID (user's device joins an virtual private network, IP address of a user's device and a VPNID, and a notifying section for notifying contents of a registration to other VPN terminating device which controls that same VPNID as the user's device). It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the invention of the '692 reference with the invention of Oguchi since Oguchi provides a method of establishing a virtual network

and distributing the necessary information to establish and maintain such a virtual network, allowing the optical network of the '692 reference to provide optical VPN services to customers and provide the privacy, robustness, and cost effectiveness of virtual private networks.

In regards to Claims 7/2 and 7/4, as discussed in the rejections of Claims 2 and 4, the ‘692 reference in view of Morinaga and Oguchi teaches an OVPN terminating device and a registering section that registers information for a user’s own device which corresponds to a first signal format which is used in a user’s device with an IP address of a user’s device and a VPNID.

The ‘692 reference fails to teach a port identifier.

Oguchi further teaches in paragraphs [0045] and [0202], a virtual router correspondence table that includes port numbers (a port identifier). It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the invention of the '692 reference with the invention of Oguchi since Oguchi provides a method of establishing a virtual network and distributing the necessary information to establish and maintain such a virtual network, allowing the optical network of the '692 reference to provide optical VPN services to customers and provide the privacy, robustness, and cost effectiveness of virtual private networks.

In regards to Claim 8, as discussed in the rejection of Claim 2, the ‘692 reference in view of Morinaga and Oguchi teaches an OVPN terminating device and a

converting section. The ‘692 reference further teaches an operation in a user’s own device. The ‘692 reference further teaches in paragraph [0008], page 3, lines 17-19, optical transport network data entities are clients of SDH or SONET, implicitly teaching the components of these entities are already treated as clients in the optical network and can be implemented in client equipment (an operation in a user’s own device).

In regards to Claim 9, the ‘692 reference teaches in paragraph [0005], page 2, lines 40-43, 48-49 and 52-55, an optical transport network is intended to be a multi-service network that supports a wide variety of layers including SDH STM-N, SONET, ATM, IP, as well as other formats, to provide a universal transport medium for high bandwidth services, where client signals are mapped into the payload area of a frame structure called an optical transport unit (OUT), and where the payload to be carried fro the client, i.e. the client signal, which may be ATM, SDH, STM-N, or IP, is mapped into an optical payload unit (OPU), and, in paragraph [0019], page 5, lines 50-55, and in Fig. 1, page 18, a node N1 (Fig. 1), a node SNA (Fig. 1), a node SNB (Fig. 1), and a node N1 (Fig. 1) at the edges a conventional SDH network (optical network, and a plurality of converting sections, which are disposed so as to correspond to plural different first signal formats, for converting a first signal format and a second signal format alternatively under conditions in which the first signal format is used by a user’s device and a second signal format which is used in the network are different from each other, converting sections being commonly used by a plurality of terminating devices which

are not provided with sections for converting a first signal format and a second signal format alternately).

The ‘692 reference fails to teach a section for performing an alternate converting operation.

Morinaga teaches in column 5, line 60 though column 6, line 6, and in column 7, lines 45-59, and in FIG. 2, Sheet 2 of 9, a H.323 protocol portion (item 33, FIG. 2), a CODEC (item 34, FIG. 2), and a call control portion (item 31, FIG. 2), that operate where a transmission format to be used in accordance with each user information of a calling side is registered as a circuit, and a CODEC to be used in accordance with each user information of the calling side is registered as the CODEC, and if the user information of a calling side is accompanied by ON flag in the target parameter setting table, the reference table of the user information of the calling side and communication method is looked up, so that the transmission format to be used as the communication method is decided (a section for performing an alternate converting operation). It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the invention of the '692 reference with the invention of Morinaga since Morinaga teaches a system that involves storing user information and transmission parameters, allowing the system of the '692 reference to be able to adjust routing parameters that best serve a user’s preferences or QoS requirements.

The ‘692 reference fails to teach user’s device joins an virtual private network.

Oguchi teaches in paragraph [0065], [0067], [0083], [0085], and [0143], virtual routers having the same VPN-ID exchange routing information though a level-2 tunnel

established between edge routers, which can involves a host having an IP address, and then generate routing tables for that VPN-ID (user's device joins an virtual private network, IP address of a user's device and a VPNID). It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the invention of the '692 reference with the invention of Oguchi since Oguchi provides a method of establishing a virtual network and distributing the necessary information to establish and maintain such a virtual network, allowing the optical network of the '692 reference to provide optical VPN services to customers and provide the privacy, robustness, and cost effectiveness of virtual private networks.

In regards to Claim 10, as discussed in the rejection of Claim 9, the '692 reference, Morinaga, and Oguchi teaches a collective converting device.

The '692 reference teaches in paragraph [0005], page 2, lines 40-43, 48-49 and 52-55, an optical transport network is intended to be a multi-service network that supports a wide variety of layers including SDH STM-N, SONET, ATM, IP, as well as other formats, to provide a universal transport medium for high bandwidth services, where client signals are mapped into the payload area of a frame structure called an optical transport unit (OUT), and where the payload to be carried fro the client, i.e. the client signal, which may be ATM, SDH, STM-N, or IP, is mapped into an optical payload unit (OPU), and, in paragraph [0019], page 5, lines 50-55, and in Fig. 1, page 18, a node N1 (Fig. 1), a node SNA (Fig. 1), a node SNB (Fig. 1), and a node N1 (Fig. 1) at the edges a conventional SDH network (an optical communications network).

In regards to Claim 69/2, as discussed in the rejection of Claim 2, the ‘692 reference in view of Morinaga and Oguchi teaches an OVPN terminating device.

The ‘692 reference teaches in paragraph [0005], page 2, lines 40-43, 48-49 and 52-55, an optical transport network is intended to be a multi-service network that supports a wide variety of layers including SDH STM-N, SONET, ATM, IP, as well as other formats, to provide a universal transport medium for high bandwidth services, where client signals are mapped into the payload area of a frame structure called an optical transport unit (OUT), and where the payload to be carried fro the client, i.e. the client signal, which may be ATM, SDH, STM-N, or IP, is mapped into an optical payload unit (OPU), and, in paragraph [0019], page 5, lines 50-55, and in Fig. 1, page 18, a node N1 (Fig. 1), a node SNA (Fig. 1), a node SNB (Fig. 1), and a node N1 (Fig. 1) at the edges a conventional SDH network (an optical communication network).

In regards to Claim 75/1, as discussed in the rejection of Claim 1, the ‘692 reference in view of Morinaga and Oguchi teaches an OVPN system.

The ‘692 reference teaches in paragraph [0005], page 2, lines 40-43, 48-49 and 52-55, an optical transport network is intended to be a multi-service network that supports a wide variety of layers including SDH STM-N, SONET, ATM, IP, as well as other formats, to provide a universal transport medium for high bandwidth services, where client signals are mapped into the payload area of a frame structure called an optical transport unit (OUT), and where the payload to be carried fro the client, i.e. the

client signal, which may be ATM, SDH, STM-N, or IP, is mapped into an optical payload unit (OPU), and, in paragraph [0019], page 5, lines 50-55, and in Fig. 1, page 18, a node N1 (Fig. 1), a node SNA (Fig. 1), a node SNB (Fig. 1), and a node N1 (Fig. 1) at the edges a conventional SDH network (an optical communication network).

Claims 13, 22/13, 23 and 69/13 are rejected under 35 U.S.C. 103(a) as being unpatentable over the ‘692 reference in view of Newell, Jr. et al. (Patent No.: US 6,668,319 B1) and French et al. (Pub. No.: 2003/0041167 A1), hereafter referred to as Newell and French, respectively.

In regards to Claim 13, the ‘692 reference teaches in paragraph [0005], page 2, lines 40-43, 48-49 and 52-55, an optical transport network is intended to be a multi-service network that supports a wide variety of layers including SDH STM-N, SONET, ATM, IP, as well as other formats, to provide a universal transport medium for high bandwidth services, where client signals are mapped into the payload area of a frame structure called an optical transport unit (OUT), and where the payload to be carried fro the client, i.e. the client signal, which may be ATM, SDH, STM-N, or IP, is mapped into an optical payload unit (OPU), and, in paragraph [0019], page 5, lines 50-55, and in Fig. 1, page 18, a node N1 (Fig. 1), a node SNA (Fig. 1), a node SNB (Fig. 1), and a node N1 (Fig. 1) at the edges a conventional SDH network (optical network, and a plurality of converting sections, which are disposed so as to correspond to plural different first signal formats, for converting a first signal format and a second signal format alternatively under conditions in which the first signal format is used by a own

terminating device and a second signal format which is used in the network are different from each other, and a terminating device for containing the own terminating device, and performing alternate converting operations).

The ‘692 reference fails to teach a retrieving section for detecting whether or not there is a section for performing an operation, a notifying section to determine whether or not a format is used by another device and notify that the formats do not coincide each other for setting up a service to a own terminating device, a generating section for generating an IP address and a VPNID to a own terminating device, and a registering section for registering an IP address and a VPNID generated by a generating section and information used by a own terminating device to which an IP address and a VPNIS are added.

Newell teaches in column 4, lines 11-27, devices exchange information concerning which protocol feature teaches does or does not support (a retrieving section for detecting whether or not there is a section for performing an operation). It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the invention of the '692 reference with the invention of Newell since Newell provides a method in which devices in a network can inform other devices of network capabilities, allowing devices to make appropriate decision when routing requests, allowing the system of the '692 reference to performing routing based on the capabilities of other devices.

Newell teaches in column 4, lines 11-27, devices exchange information concerning which protocol feature each does or does not support (a notifying section to

determine whether or not a format is used by another device and notify that the formats do not coincide each other for setting up a service to a own terminating device). It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the invention of the '692 reference with the invention of Newell since Newell provides a method in which devices in a network can inform other devices of network capabilities, allowing devices to make appropriate decision when routing requests, allowing the system of the '692 reference to performing routing based on the capabilities of other devices.

French teaches in paragraphs [0227] and [0275], assigned VPN IDs are stored as updated information within network objects, and a VPN creator ensures unique VPN IDs are created such that duplicate addresses can exist within a VPN that has an assigned VPN ID, and a server generates an IP address on behalf of its client (a generating section for generating an IP address and a VPNID to a own terminating device, and a registering section for registering an IP address and a VPNID generated by a generating section and information used by a own terminating device to which an IP address and a VPNIS are added). It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the invention of the '692 reference with the invention of French since French provides a system of maintaining and updating VPN IDs for IP addresses within virtual private networks, allowing the optical network of the '692 reference to provide optical VPN services to customers and provide the privacy, robustness, and cost effectiveness of virtual private networks.

In regards to Claim 22/13, as discussed in the rejection of Claim 13, the ‘692 reference in view of French teaches an OVPN terminating device and a converting section. The ‘692 reference further teaches an operation in a user’s own device. The ‘692 reference further teaches in paragraph [0008], page 3, lines 17-19, optical transport network data entities are clients of SDH or SONET, implicitly teaching the components of these entities are already treated as clients in the optical network and can be implemented in client equipment (an operation in a user’s own device).

In regards to Claim 23, as discussed in the rejection of Claim 58, the ‘692 reference in view of Miyabe and Oguchi teaches a user’s device and an OVPN.

The ‘692 reference fails to teach a separating section for separating a user’s device and a network, and a returning section for returning a test beam which is transmitted from a network.

Tosey teaches in column 7, lines 14-17 and 29-31, and in FIG. 2, Sheet 2 of 11, a network computing device (item 21, FIG. 2) that is part of a network of other network devices, and this network is separated from a WAN of users by a router (item 24, FIG. 2), and where the network computing device (item 21, FIG. 2) executes a link test to a peer network device, such as the router (item 24, FIG. 2), and setermines if a peer network device has returned a response (a separating section for separating a user’s device and a network, and a returning section for returning a test beam which is transmitted from a network). It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the invention of the '692 reference with the

invention of Tosey since Tosey provides a method of testing connections of a network device to other network devices, including devices that connect it to another network and its users, and where the device being tested can respond to confirm connectivity, including connectivity to a network of users, allowing the system of the '692 reference to detect network failures and respond by developing paths to avoid them and reestablish connectivity.

In regards to Claim 69/13, as discussed in the rejection of Claim 13, the ‘692 reference in view of Miyabe and Oguchi teaches an OVPN terminating device.

The ‘692 reference teaches in paragraph [0005], page 2, lines 40-43, 48-49 and 52-55, an optical transport network is intended to be a multi-service network that supports a wide variety of layers including SDH STM-N, SONET, ATM, IP, as well as other formats, to provide a universal transport medium for high bandwidth services, where client signals are mapped into the payload area of a frame structure called an optical transport unit (OUT), and where the payload to be carried fro the client, i.e. the client signal, which may be ATM, SDH, STM-N, or IP, is mapped into an optical payload unit (OPU), and, in paragraph [0019], page 5, lines 50-55, and in Fig. 1, page 18, a node N1 (Fig. 1), a node SNA (Fig. 1), a node SNB (Fig. 1), and a node N1 (Fig. 1) at the edges a conventional SDH network (an optical communication network).

Claims 14, 15, 22/14, 22/15, 26, 48, 75/26 and 75/48 are rejected under 35 U.S.C. 103(a) as being unpatentable over the ‘692 reference in view of Newell, French, and Morinaga.

In regards to Claim 14, as discussed in the rejection of Claim 13, the ‘692 reference in view of Newell and French teaches a user’s device having an IP address and a first signal format type information used by a user’s device.

The ‘692 reference fails to teach a selecting section for selecting a first signal format which is used by the user who receives a calling connection request according to a first signal format type information which is used by a user’s device, included in a calling connection request, from which a calling connection request is transmitted when a calling connection request is received from a user’s device, and a transmitting section for transmitting format type information which is selected by a sleeting section to a user who receives a calling connection request together with a calling connection request.

Morinaga teaches in column 5, line 60 though column 6, line 6, and in column 7, lines 45-59, and in column 12, lines 18-25, and in FIG. 2, Sheet 2 of 9, and in FIG. 5, Sheet 5 of 9, a H.323 protocol portion (item 33, FIG. 2), a CODEC (item 34, FIG. 2), and a call control portion (item 31, FIG. 2), that operate where a transmission format to be used in accordance with each user information of a calling side is registered as a circuit, and a CODEC to be used in accordance with each user information of the calling side is registered as the CODEC, and if the user information of a calling side is accompanied by ON flag in the target parameter setting table, the reference table of the user information of the calling side and communication method is looked up, so that the

transmission format to be used as the communication method is decided, and a request of setup is propagated to opposite site of the intended connection (item #311, FIG. 5) based on selection of CODEC and format (a selecting section for selecting a first signal format which is used by the user who receives a calling connection request according to a first signal format type information which is used by a user's device, included in a calling connection request, from which a calling connection request is transmitted when a calling connection request is received from a user's device, and a transmitting section for transmitting format type information which is selected by a sleeting section to a user who receives a calling connection request together with a calling connection request). It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the invention of the '692 reference with the invention of Morinaga since Morinaga teaches a system that involves storing user information and transmission parameters for use in efficient connection setup.

In regards to Claim 15, as discussed in the rejection of Claim 14, the '692 reference in view of Newell and French teaches a signal format and receiving a response to a calling connection request.

The '692 reference fails to teach a notifying section to determine whether or not a format is used by another device and notify that the formats do not coincide each other for setting up a service to a user's device.

Newell teaches in column 4, lines 11-27, devices exchange information concerning which protocol feature teaches does or does not support (a notifying section

to determine whether or not a format is used by another device and notify that the formats do not coincide each other for setting up a service to a user's device). It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the invention of the '692 reference with the invention of Newell since Newell provides a method in which devices in a network can inform other devices of network capabilities, allowing devices to make appropriate decision when routing requests, allowing the system of the '692 reference to performing routing based on the capabilities of other devices.

In regards to Claims 22/14 and 22/15, as discussed in the rejection of Claim 14, the '692 reference in view of French teaches an OVPN terminating device and a converting section. The '692 reference further teaches an operation in a user's own device. The '692 reference further teaches in paragraph [0008], page 3, lines 17-19, optical transport network data entities are clients of SDH or SONET, implicitly teaching the components of these entities are already treated as clients in the optical network and can be implemented in client equipment (an operation in a user's own device).

In regards to Claim 26, as discussed in the rejection of Claim 13, the '692 reference teaches an OVPN system.

The '692 reference fails to teach a receiving and determining section for receiving a test signal which is transmitted via a data channel by using an identifier from

a user's device and determining a first signal format type which belongs to a user's device.

Morinaga teaches in column 5, line 60 though column 6, line 6, and in column 7, lines 45-59, and in FIG. 2, Sheet 2 of 9, a H.323 protocol portion (item 33, FIG. 2), a CODEC (item 34, FIG. 2), and a call control portion (item 31, FIG. 2), that operate where a transmission format to be used in accordance with each user information of a calling side is registered as a circuit, and a CODEC to be used in accordance with each user information of the calling side is registered as the CODEC, and if the user information of a calling side is accompanied by ON flag in the target parameter setting table, the reference table of the user information of the calling side and communication method is looked up, so that the transmission format to be used as the communication method is decided, and, in column 9, lines 41-54, and in FIG. 3, Sheet 3 of 9, a gateway receives a calling signal and a target parameter setting a table is looked up as to judge parameters (a receiving and determining section for receiving a test signal which is transmitted via a data channel by using an identifier from a user's device and determining a first signal format type which belongs to a user's device). It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the invention of the '692 reference with the invention of Morinaga since Morinaga teaches a system that involves storing user information and transmission parameters, allowing the system of the '692 reference to be able to adjust routing parameters that best serve a user's preferences or QoS requirements.

In regards to Claim 48, as discussed in the rejection of Claim 13, the ‘692 reference in view of Newell and French teaches an OVPN system.

The ‘692 reference fails to teach a receiving and transmitting section for receiving a notice that a user’s device is connected to a base point device via a control channel from a base point device which is disposed between a user’s device and a network, and transmitting an IP address and a VPNID which are allocated to a user’s device according to a base point device.

Morinaga teaches in column 5, line 60 though column 6, line 6, and in column 7, lines 45-59, and in FIG. 2, Sheet 2 of 9, a H.323 protocol portion (item 33, FIG. 2), a CODEC (item 34, FIG. 2), and a call control portion (item 31, FIG. 2), that operate where a transmission format to be used in accordance with each user information of a calling side is registered as a circuit, and a CODEC to be used in accordance with each user information of the calling side is registered as the CODEC, and if the user information of a calling side is accompanied by ON flag in the target parameter setting table, the reference table of the user information of the calling side and communication method is looked up, so that the transmission format to be used as the communication method is decided, and, in column 9, lines 41-54, and in FIG. 3, Sheet 3 of 9, a gateway receives a calling signal and a target parameter setting a table is looked up as to judge parameters (a receiving and transmitting section for receiving a notice that a user’s device is connected to a base point device via a control channel from a base point device which is disposed between a user’s device and a network). It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the

invention of the '692 reference with the invention of Morinaga since Morinaga teaches a system that involves storing user information and transmission parameters, allowing the system of the '692 reference to be able to adjust routing parameters that best serve a user's preferences or QoS requirements.

French teaches in paragraphs [0227] and [0275], assigned VPN IDs are stored as updated information within network objects, and a VPN creator ensures unique VPN IDs are created such that duplicate addresses can exist within a VPN that has an assigned VPN ID, and a server generates an IP address on behalf of its client (transmitting an IP address and a VPNID which are allocated to a user's device according to a base point device). It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the invention of the '692 reference with the invention of French since French provides a system of maintaining and updating VPN IDs for IP addresses within virtual private networks, allowing the optical network of the '692 reference to provide optical VPN services to customers and provide the privacy, robustness, and cost effectiveness of virtual private networks.

In regards to Claim 75/26 and 75/48, as discussed in the rejections of Claims 26 and 48, the '692 reference in view of Miyabe and Oguchi teaches an OVPN system.

The '692 reference teaches in paragraph [0005], page 2, lines 40-43, 48-49 and 52-55, an optical transport network is intended to be a multi-service network that supports a wide variety of layers including SDH STM-N, SONET, ATM, IP, as well as other formats, to provide a universal transport medium for high bandwidth services,

where client signals are mapped into the payload area of a frame structure called an optical transport unit (OUT), and where the payload to be carried fro the client, i.e. the client signal, which may be ATM, SDH, STM-N, or IP, is mapped into an optical payload unit (OPU), and, in paragraph [0019], page 5, lines 50-55, and in Fig. 1, page 18, a node N1 (Fig. 1), a node SNA (Fig. 1), a node SNB (Fig. 1), and a node N1 (Fig. 1) at the edges a conventional SDH network (an optical communication network).

Claims 17 and 22/17 are rejected under 35 U.S.C. 103(a) as being unpatentable over the '692 reference in view of Newell, French, and Jurkevich et al. (Patent Number: 5,282,207), hereafter referred to as Jurkevich.

In regards to Claim 17, as discussed in the rejection of Claim 13, the '692 reference in view of Newell and French teaches a converting section for performing an alternate converting operation and a retrieving result by a retrieving section indicates that there is not a section for performing alternate converting operation and generating an IP address and a VPNID for a user's device.

The '692 reference fails to teach an inquiring section for inquiring whether or not it is possible to change a vacant section to user's device which is under operation, and a requesting a generating section for requesting for changing a section for performing alternate operation to other user device.

Jurkevich teaches in column 37, lines 36-60, certain links experiencing server congestion may cause a request to change a format to send data on new bandwidth, and if a request from more bandwidth is approved, additional bandwidth is allocated as

requested (an inquiring section for inquiring whether or not it is possible to change a vacant section to user's device which is under operation, and a requesting a generating section for requesting for changing a section for performing alternate operation to other user device). It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the invention of the '692 reference with the invention of Jurkevich since Jurkevich provides a method of acquiring new network resources when previous network resource become inadequate, allowing the system of the '692 reference to adjust to new users attempting to establish connections and send data and for current users that are changing their data rate requirements.

In regards to Claim 22/13, as discussed in the rejection of Claim 13, the '692 reference in view of French teaches an OVPN terminating device and a converting section. The '692 reference further teaches an operation in a user's own device. The '692 reference further teaches in paragraph [0008], page 3, lines 17-19, optical transport network data entities are clients of SDH or SONET, implicitly teaching the components of these entities are already treated as clients in the optical network and can be implemented in client equipment (an operation in a user's own device).

Claims 40 and 75/40 are rejected under 35 U.S.C. 103(a) as being unpatentable over the '692 reference in view of Newell, French, and further in view of Oguchi.

In regards to Claim 40, the '692 reference teaches in paragraph [0005], page 2, lines 40-43, 48-49 and 52-55, an optical transport network is intended to be a multi-

service network that supports a wide variety of layers including SDH STM-N, SONET, ATM, IP, as well as other formats, to provide a universal transport medium for high bandwidth services, where client signals are mapped into the payload area of a frame structure called an optical transport unit (OUT), and where the payload to be carried fro the client, i.e. the client signal, which may be ATM, SDH, STM-N, or IP, is mapped into an optical payload unit (OPU), and, in paragraph [0019], page 5, lines 50-55, and in Fig. 1, page 18, a node N1 (Fig. 1), a node SNA (Fig. 1), a node SNB (Fig. 1), and a node N1 (Fig. 1) at the edges a conventional SDH network (a transmitting section for transmitting a first signal format which is transmitted from a user's device to an optical network by encapsulating a first signal format by a second signal format, and a transmitting section for transmitting an encapsulated signal which is encapsulated by a second signal format which is transmitted from an optical network to a user's device by de-encapsulating to a first signal format, and a terminating device for containing the user's device). The '692 reference fails to teach VPN. Oguchi teaches VPN.

Oguchi teaches in paragraph [0065], [0067], [0083], [0085], and [0143], virtual routers having the same VPN-ID exchange routing information though a level-2 tunnel established between edge routers, which can involves a host having an IP address, and then generate routing tables for that VPN-ID (VPN). It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the invention of the '692 reference with the invention of Oguchi since Oguchi provides a method of establishing a virtual network and distributing the necessary information to establish and maintain such a virtual network, allowing the optical network of the '692 reference to provide optical

VPN services to customers and provide the privacy, robustness, and cost effectiveness of virtual private networks.

In regards to Claim 75/40, as discussed in the rejection of Claim 40, the ‘692 reference in view of Newell, French, and Oguchi teaches an OVPN system.

The ‘692 reference teaches in paragraph [0005], page 2, lines 40-43, 48-49 and 52-55, an optical transport network is intended to be a multi-service network that supports a wide variety of layers including SDH STM-N, SONET, ATM, IP, as well as other formats, to provide a universal transport medium for high bandwidth services, where client signals are mapped into the payload area of a frame structure called an optical transport unit (OUT), and where the payload to be carried fro the client, i.e. the client signal, which may be ATM, SDH, STM-N, or IP, is mapped into an optical payload unit (OPU), and, in paragraph [0019], page 5, lines 50-55, and in Fig. 1, page 18, a node N1 (Fig. 1), a node SNA (Fig. 1), a node SNB (Fig. 1), and a node N1 (Fig. 1) at the edges a conventional SDH network (an optical communication network).

Claims 43 and 47 are rejected under 35 U.S.C. 103(a) as being unpatentable over the ‘692 reference in view of Oguchi.

In regards to Claim 43, the ‘692 reference teaches in paragraph [0005], page 2, lines 40-43, 48-49 and 52-55, an optical transport network is intended to be a multi-service network that supports a wide variety of layers including SDH STM-N, SONET, ATM, IP, as well as other formats, to provide a universal transport medium for high

bandwidth services, where client signals are mapped into the payload area of a frame structure called an optical transport unit (OUT), and where the payload to be carried fro the client, i.e. the client signal, which may be ATM, SDH, STM-N, or IP, is mapped into an optical payload unit (OPU), and, in paragraph [0019], page 5, lines 50-55, and in Fig. 1, page 18, a node N1 (Fig. 1), a node SNA (Fig. 1), a node SNB (Fig. 1), and a node N1 (Fig. 1) at the edges a conventional SDH network (optical network, and a plurality of converting sections, which are disposed so as to correspond to plural different first signal formats, for converting a first signal format and a second signal format alternatively under conditions in which the first signal format is used by a user's device and a second signal format which is used in the network are different from each other, a transmitting section for transmitting a first signal format which is transmitted from a user's device to an optical network by encapsulating a first signal format by a second signal format, and a transmitting section for transmitting an encapsulated signal which is encapsulated by a second signal format which is transmitted from an optical network to a user's device by de-encapsulating to a first signal format, and a terminating device for containing the user's device).

The '692 reference teaches in paragraph [0053], page 15, lines 5-7, internetworking that is compatible with the deployment of an optical transport network overlay network where both optical network line systems and cross-connects (including add drop multiplexers (ADMs)) are deployed simultaneously (converting sections are commonly used by a plurality of optical cross connecting devices).

The ‘692 reference teaches in paragraphs [0011] and [0012], page 3, lines 36-57, tunneling a first frame from a first network to a second network via an intermediate network, and at a first node disposed between the first network and the intermediate network, mapping data of the first frame into payload areas of a plurality of second frames, transporting the second frames across the intermediate network to a second node disposed between the intermediate network and the second network, and at the second node, receiving the plurality of second frames and reassembling the first frame from payloads of the second frames and outputting the reassembled first frame to a second network (converting a first signel format in a lyer 1 which is employed in a user’s device and a second signal format which is prior).

The ‘692 reference fails to teach VPN.

Oguchi teaches in paragraph [0065], [0067], [0083], [0085], and [0143], virtual routers having the same VPN-ID exchange routing information though a level-2 tunnel established between edge routers, which can involves a host having an IP address, and then generate routing tables for that VPN-ID (VPN). It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the invention of the '692 reference with the invention of Oguchi since Oguchi provides a method of establishing a virtual network and distributing the necessary information to establish and maintain such a virtual network, allowing the optical network of the '692 reference to provide optical VPN services to customers and provide the privacy, robustness, and cost effectiveness of virtual private networks.

In regards to Claim 47, as discussed in the rejection of Claim 43, the ‘692 reference in view of Oguchi teaches a collective converting device.

The ‘692 reference teaches in paragraph [0005], page 2, lines 40-43, 48-49 and 52-55, an optical transport network is intended to be a multi-service network that supports a wide variety of layers including SDH STM-N, SONET, ATM, IP, as well as other formats, to provide a universal transport medium for high bandwidth services, where client signals are mapped into the payload area of a frame structure called an optical transport unit (OUT), and where the payload to be carried fro the client, i.e. the client signal, which may be ATM, SDH, STM-N, or IP, is mapped into an optical payload unit (OPU), and, in paragraph [0019], page 5, lines 50-55, and in Fig. 1, page 18, a node N1 (Fig. 1), a node SNA (Fig. 1), a node SNB (Fig. 1), and a node N1 (Fig. 1) at the edges a conventional SDH network (an optical communication network).

Claims 41, 42, 44 and 45 are rejected under 35 U.S.C. 103(a) as being unpatentable over the ‘692 reference in view of Oguchi, and further in view of Takagi.

In regards to Claim 41 and 44, as discussed in the rejections of Claim 40 and 43, the ‘692 reference in view of Oguchi teaches a transmitting section to an OVPN.

The ‘692 reference fails to teach a multiplying section for multiplying a plurality of signals according to a second signal format.

Takagi teaches in paragraphs [0076] though [0084], and in FIG. 1, FIG. 2, FIG. 3, and FIG. 4, a system where a multiple ATM cells are combined and processed and encapsulated for transmission though an optical fiber to a single base station, and

where a base station extracts the multiple ATM cells from the encapsulation (a multiplying section for multiplying a plurality of signals by a second signal format which are directed to a common destination, and a transmitting section to a user's device is provided with a separating section for the multiplied signal by the multiplying section into a plurality of signals). It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the invention of the '692 reference with the invention of Takagi since Takagi teaches a detailed method of combining data unit prior to encapsulation and transmission across an optical transmission medium so that transmission speeds are maintained, which can be incorporated into the system of the '692 reference so that overhead is reduced and transmission speeds are maintained across an optical network.

In regards to Claim 42 and 45, as discussed in the rejections of Claim 40 and 43, the '692 reference in view of Oguchi teaches a transmitting section to an OVPN.

The '692 reference fails to teach a dividing and encapsulating section for dividing and encapsulating a series of signals according to a first signal format into a plurality of signals according to a second signal format.

Takagi teaches in paragraphs [0076] though [0084], and in FIG. 1, FIG. 2, FIG. 3, and FIG. 4, a system where a multiple ATM cells are combined and processed and encapsulated for transmission though an optical fiber to a single base station, and where a base station extracts the multiple ATM cells from the encapsulation (a dividing and encapsulating section for dividing and encapsulating a series of signals according

to a first signal format into a plurality of signals according to a second signal format). It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the invention of the '692 reference with the invention of Takagi since Takagi teaches a detailed method of combining data unit prior to encapsulation and transmission across an optical transmission medium so that transmission speeds are maintained, which can be incorporated into the system of the '692 reference so that overhead is reduced and transmission speeds are maintained across an optical network.

Claims 18, 21, 49, 50, 52, 53, 54, 69/49, 76/18 and 76/53 are rejected under 35 U.S.C. 103(a) as being unpatentable over the ‘692 reference in view of Morinaga and French.

In regards to Claim 18, the ‘692 reference teaches in paragraph [0005], page 2, lines 40-43, 48-49 and 52-55, an optical transport network is intended to be a multi-service network that supports a wide variety of layers including SDH STM-N, SONET, ATM, IP, as well as other formats, to provide a universal transport medium for high bandwidth services, where client signals are mapped into the payload area of a frame structure called an optical transport unit (OUT), and where the payload to be carried from the client, i.e. the client signal, which may be ATM, SDH, STM-N, or IP, is mapped into an optical payload unit (OPU), and, in paragraph [0019], page 5, lines 50-55, and in Fig. 1, page 18, a node N1 (Fig. 1), a node SNA (Fig. 1), a node SNB (Fig. 1), and a node N1 (Fig. 1) at the edges a conventional SDH network (a transmitting section for

transmitting a first type information). The ‘692 reference fails to teach a determining section for determining a first signal format type which is used in a user’s device, format type information which is determined by a determining section, and a maintaining section for maintaining a plurality of generated IP address, a VPNIS, and a first signal format type information.

Morinaga teaches in column 5, line 60 though column 6, line 6, and in column 7, lines 45-59, and in FIG. 2, Sheet 2 of 9, a H.323 protocol portion (item 33, FIG. 2), a CODEC (item 34, FIG. 2), and a call control portion (item 31, FIG. 2), that operate where a transmission format to be used in accordance with each user information of a calling side is registered as a circuit, and a CODEC to be used in accordance with each user information of the calling side is registered as the CODEC, and if the user information of a calling side is accompanied by ON flag in the target parameter setting table, the reference table of the user information of the calling side and communication method is looked up, so that the transmission format to be used as the communication method is decided, and, in column 9, lines 41-54, and in FIG. 3, Sheet 3 of 9, a gateway receives a calling signal and a target parameter setting a table is looked up as to judge parameters (a determining section for determining a first signal format type which is used in a user’s device, format type information which is determined by a determining section). It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the invention of the '692 reference with the invention of Morinaga since Morinaga teaches a system that involves storing user information and

transmission parameters, allowing the system of the '692 reference to be able to adjust routing parameters that best serve a user's preferences or QoS requirements.

French teaches in paragraphs [0227] and [0275], assigned VPN IDs are stored as updated information within network objects, and a VPN creator ensures unique VPN IDs are created such that duplicate addresses can exist within a VPN that has an assigned VPN ID, and a server generates an IP address on behalf of its client (a maintaining section for maintaining a plurality of generated IP address, and a VPNIS). It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the invention of the '692 reference with the invention of French since French provides a system of maintaining and updating VPN IDs for IP addresses within virtual private networks, allowing the optical network of the '692 reference to provide optical VPN services to customers and provide the privacy, robustness, and cost effectiveness of virtual private networks.

In regards to Claim 21, the '692 reference teaches in paragraph [0005], page 2, lines 40-43, 48-49 and 52-55, an optical transport network is intended to be a multi-service network that supports a wide variety of layers including SDH STM-N, SONET, ATM, IP, as well as other formats, to provide a universal transport medium for high bandwidth services, where client signals are mapped into the payload area of a frame structure called an optical transport unit (OUT), and where the payload to be carried from the client, i.e. the client signal, which may be ATM, SDH, STM-N, or IP, is mapped into an optical payload unit (OPU), and, in paragraph [0019], page 5, lines 50-55, and in

Fig. 1, page 18, a node N1 (Fig. 1), a node SNA (Fig. 1), a node SNB (Fig. 1), and a node N1 (Fig. 1) at the edges a conventional SDH network (a transmitting section for transmitting a first type information). The ‘692 reference fails to teach a determining section for determining a first signal format type which is used in a user’s device, format type information which is determined by a determining section, and a maintaining section for maintaining a plurality of generated IP address, a VPNIS, and a first signal format type information.

Morinaga teaches in column 5, line 60 though column 6, line 6, and in column 7, lines 45-59, and in FIG. 2, Sheet 2 of 9, a H.323 protocol portion (item 33, FIG. 2), a CODEC (item 34, FIG. 2), and a call control portion (item 31, FIG. 2), that operate where a transmission format to be used in accordance with each user information of a calling side is registered as a circuit, and a CODEC to be used in accordance with each user information of the calling side is registered as the CODEC, and if the user information of a calling side is accompanied by ON flag in the target parameter setting table, the reference table of the user information of the calling side and communication method is looked up, so that the transmission format to be used as the communication method is decided, and, in column 9, lines 41-54, and in FIG. 3, Sheet 3 of 9, a gateway receives a calling signal and a target parameter setting a table is looked up as to judge parameters (a determining section for determining a first signal format type which is used in a user’s device, format type information which is determined by a determining section). It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the invention of the '692 reference with the invention of Morinaga

since Morinaga teaches a system that involves storing user information and transmission parameters, allowing the system of the '692 reference to be able to adjust routing parameters that best serve a user's preferences or QoS requirements.

French teaches in paragraphs [0227] and [0275], assigned VPN IDs are stored as updated information within network objects, and a VPN creator ensures unique VPN IDs are created such that duplicate addresses can exist within a VPN that has an assigned VPN ID, and a server generates an IP address on behalf of its client (a maintaining section for maintaining a plurality of generated IP address, a VPNIS, and a first signal format type information). It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the invention of the '692 reference with the invention of French since French provides a system of maintaining and updating VPN IDs for IP addresses within virtual private networks, allowing the optical network of the '692 reference to provide optical VPN services to customers and provide the privacy, robustness, and cost effectiveness of virtual private networks.

In regards to Claim 49, the '692 reference teaches in paragraph [0005], page 2, lines 40-43, 48-49 and 52-55, an optical transport network is intended to be a multi-service network that supports a wide variety of layers including SDH STM-N, SONET, ATM, IP, as well as other formats, to provide a universal transport medium for high bandwidth services, where client signals are mapped into the payload area of a frame structure called an optical transport unit (OUT), and where the payload to be carried fro the client, i.e. the client signal, which may be ATM, SDH, STM-N, or IP, is mapped into

an optical payload unit (OPU), and, in paragraph [0019], page 5, lines 50-55, and in Fig. 1, page 18, a node N1 (Fig. 1), a node SNA (Fig. 1), a node SNB (Fig. 1), and a node N1 (Fig. 1) at the edges a conventional SDH network (optical network, and a plurality of converting sections, which are disposed so as to correspond to plural different first signal formats, for converting a first signal format and a second signal format alternatively under conditions in which the first signal format is used by a user's device and a second signal format which is used in the network are different from each other, a transmitting section for transmitting a first signal format which is transmitted from a user's device to an optical network by encapsulating a first signal format by a second signal format, and a transmitting section for transmitting an encapsulated signal which is encapsulated by a second signal format which is transmitted from an optical network to a user's device by de-encapsulating to a first signal format, and a terminating device for containing the user's device).

The '692 reference fails to teach a receiving and transmitting section for receiving a notice that a user's device is connected to a base point device via a control channel from a base point device which is disposed between a user's device and a network, VPN, and transmitting an IP address and a VPNID which are allocated to a user's device according to a base point device.

Morinaga teaches in column 5, line 60 though column 6, line 6, and in column 7, lines 45-59, and in FIG. 2, Sheet 2 of 9, a H.323 protocol portion (item 33, FIG. 2), a CODEC (item 34, FIG. 2), and a call control portion (item 31, FIG. 2), that operate where a transmission format to be used in accordance with each user information of a

calling side is registered as a circuit, and a CODEC to be used in accordance with each user information of the calling side is registered as the CODEC, and if the user information of a calling side is accompanied by ON flag in the target parameter setting table, the reference table of the user information of the calling side and communication method is looked up, so that the transmission format to be used as the communication method is decided, and, in column 9, lines 41-54, and in FIG. 3, Sheet 3 of 9, a gateway receives a calling signal and a target parameter setting a table is looked up as to judge parameters (a receiving and transmitting section for receiving a notice that a user's device is connected to a base point device via a control channel from a base point device which is disposed between a user's device and a network). It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the invention of the '692 reference with the invention of Morinaga since Morinaga teaches a system that involves storing user information and transmission parameters, allowing the system of the '692 reference to be able to adjust routing parameters that best serve a user's preferences or QoS requirements.

French teaches in paragraphs [0227] and [0275], assigned VPN IDs are stored as updated information within network objects, and a VPN creator ensures unique VPN IDs are created such that duplicate addresses can exist within a VPN that has an assigned VPN ID, and a server generates an IP address on behalf of its client (transmitting an IP address and a VPNID which are allocated to a user's device according to a base point device). It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the invention of the '692 reference with

the invention of French since French provides a system of maintaining and updating VPN IDs for IP addresses within virtual private networks, allowing the optical network of the '692 reference to provide optical VPN services to customers and provide the privacy, robustness, and cost effectiveness of virtual private networks.

In regards to Claim 50, as discussed in the rejection of Claim 49, the ‘692 reference in view of Morinaga and French teaches a receiving section and a transmitting section, a base point device, and an IP address and a VPNID.

The ‘692 reference fails to teach receiving a receipt confirmation, and transmitting a final connection confirmation for notifying the receipt of a receipt confirmation.

Morinaga further teaches in column 11, lines 50-56, and in column 12, lines 19-25, and in FIG. 5, Sheet 5 of 9, in step #301 (FIG. 5) a RECEPTION OF SETUP occurs, and then, in the connection process step # 311 (FIG. 5), a TRANSMISSION OF CONN is received, and then a transmission of RECEPTION OF CONN-ACK (receiving a receipt confirmation, and transmitting a final connection confirmation for notifying the receipt of a receipt confirmation). It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the invention of the '692 reference with the invention of Morinaga since Morinaga teaches a system that involves storing user information and transmission parameters, allowing the system of the '692 reference to be able to adjust routing parameters that best serve a user’s preferences or QoS requirements.

In regards to Claim 52, as discussed in the rejection of Claim 49, the ‘692 reference in view of Morinaga and French teaches an OVPN terminating device.

The ‘692 reference fails to teach a section for performing an alternate converting operation.

Morinaga teaches in column 5, line 60 though column 6, line 6, and in column 7, lines 45-59, and in FIG. 2, Sheet 2 of 9, a H.323 protocol portion (item 33, FIG. 2), a CODEC (item 34, FIG. 2), and a call control portion (item 31, FIG. 2), that operate where a transmission format to be used in accordance with each user information of a calling side is registered as a circuit, and a CODEC to be used in accordance with each user information of the calling side is registered as the CODEC, and if the user information of a calling side is accompanied by ON flag in the target parameter setting table, the reference table of the user information of the calling side and communication method is looked up, so that the transmission format to be used as the communication method is decided (a section for performing an alternate converting operation). It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the invention of the '692 reference with the invention of Morinaga since Morinaga teaches a system that involves storing user information and transmission parameters, allowing the system of the '692 reference to be able to adjust routing parameters that best serve a user’s preferences or QoS requirements.

In regards to Claim 53, the ‘692 reference teaches in paragraph [0005], page 2, lines 40-43, 48-49 and 52-55, an optical transport network is intended to be a multi-service network that supports a wide variety of layers including SDH STM-N, SONET, ATM, IP, as well as other formats, to provide a universal transport medium for high bandwidth services, where client signals are mapped into the payload area of a frame structure called an optical transport unit (OUT), and where the payload to be carried from the client, i.e. the client signal, which may be ATM, SDH, STM-N, or IP, is mapped into an optical payload unit (OPU), and, in paragraph [0019], page 5, lines 50-55, and in Fig. 1, page 18, a node N1 (Fig. 1), a node SNA (Fig. 1), a node SNB (Fig. 1), and a node N1 (Fig. 1) at the edges a conventional SDH network (a transmitting section for transmitting a first signal format type information which is used by a user’s device and an IP address to an OVPN terminating device).

The ‘692 reference fails to teach a detection section for detecting whether or not a user’s device is connected to a base point, a notifying section for notifying an OVPN terminating device via a control channel that it is detected that a user’s device is connected to a base point device, a transmitting section for transmitting a receipt confirmation that a receiving section received an IP address and a VPNID to an OVPN terminating device, and a receiving section for receiving an IP address and a VPNID which are allocated to a user’s device from an OVPN terminating device via a control channel.

Morinaga teaches in column 5, line 60 though column 6, line 6, and in column 7, lines 45-59, and in FIG. 2, Sheet 2 of 9, a H.323 protocol portion (item 33, FIG. 2), a

CODEC (item 34, FIG. 2), and a call control portion (item 31, FIG. 2), that operate where a transmission format to be used in accordance with each user information of a calling side is registered as a circuit, and a CODEC to be used in accordance with each user information of the calling side is registered as the CODEC, and if the user information of a calling side is accompanied by ON flag in the target parameter setting table, the reference table of the user information of the calling side and communication method is looked up, so that the transmission format to be used as the communication method is decided, and, in column 9, lines 41-54, and in FIG. 3, Sheet 3 of 9, a gateway receives a calling signal and a target parameter setting a table is looked up as to judge parameters (a detection section for detecting whether or not a user's device is connected to a base point).

Morinaga teaches in column 5, line 60 though column 6, line 6, and in column 7, lines 45-59, and in FIG. 2, Sheet 2 of 9, a H.323 protocol portion (item 33, FIG. 2), a CODEC (item 34, FIG. 2), and a call control portion (item 31, FIG. 2), that operate where a transmission format to be used in accordance with each user information of a calling side is registered as a circuit, and a CODEC to be used in accordance with each user information of the calling side is registered as the CODEC, and if the user information of a calling side is accompanied by ON flag in the target parameter setting table, the reference table of the user information of the calling side and communication method is looked up, so that the transmission format to be used as the communication method is decided, and, in column 9, lines 41-54, and in FIG. 3, Sheet 3 of 9, a gateway receives a calling signal and a target parameter setting a table is looked up as to judge

parameters (a notifying section for notifying an OVPN terminating device via a control channel that it is detected that a user's device is connected to a base point device). It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the invention of the '692 reference with the invention of Morinaga since Morinaga teaches a system that involves storing user information and transmission parameters, allowing the system of the '692 reference to be able to adjust routing parameters that best serve a user's preferences or QoS requirements.

Morinaga further teaches in column 11, lines 50-56, and in column 12, lines 19-25, and in FIG. 5, Sheet 5 of 9, in step #301 (FIG. 5) a RECEPTION OF SETUP occurs, and then, in the connection process step # 311 (FIG. 5), a TRANSMISSION OF CONN is received, and then a transmission of RECEPTION OF CONN-ACK (a transmitting section for transmitting a receipt confirmation that a receiving section received an IP address and a VPNID to an OVPN terminating device). It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the invention of the '692 reference with the invention of Morinaga since Morinaga teaches a system that involves storing user information and transmission parameters, allowing the system of the '692 reference to be able to adjust routing parameters that best serve a user's preferences or QoS requirements.

French teaches in paragraphs [0227] and [0275], assigned VPN IDs are stored as updated information within network objects, and a VPN creator ensures unique VPN IDs are created such that duplicate addresses can exist within a VPN that has an assigned VPN ID, and a server generates an IP address on behalf of its client (a

receiving section for receiving an IP address and a VPNID which are allocated to a user's device from an OVPN terminating device via a control channel). It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the invention of the '692 reference with the invention of French since French provides a system of maintaining and updating VPN IDs for IP addresses within virtual private networks, allowing the optical network of the '692 reference to provide optical VPN services to customers and provide the privacy, robustness, and cost effectiveness of virtual private networks.

In regards to Claim 54, as discussed in the rejection of Claim 53, the '692 reference in view of Morinaga and French teaches a base point device.

The '692 reference fails to teach a determining section for determining a first signal format type information which is employed in a user's device, and a transmitting device for transmitting a format type information which is determined by a determining section to an OVPN terminating device.

Morinaga teaches in column 5, line 60 though column 6, line 6, and in column 7, lines 45-59, and in FIG. 2, Sheet 2 of 9, a H.323 protocol portion (item 33, FIG. 2), a CODEC (item 34, FIG. 2), and a call control portion (item 31, FIG. 2), that operate where a transmission format to be used in accordance with each user information of a calling side is registered as a circuit, and a CODEC to be used in accordance with each user information of the calling side is registered as the CODEC, and if the user information of a calling side is accompanied by ON flag in the target parameter setting

table, the reference table of the user information of the calling side and communication method is looked up, so that the transmission format to be used as the communication method is decided, and, in column 9, lines 41-54, and in FIG. 3, Sheet 3 of 9, a gateway receives a calling signal and a target parameter setting a table is looked up as to judge parameters (a determining section for determining a first signal format type information which is employed in a user’s device). It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the invention of the '692 reference with the invention of Morinaga since Morinaga teaches a system that involves storing user information and transmission parameters, allowing the system of the '692 reference to be able to adjust routing parameters that best serve a user’s preferences or QoS requirements.

Morinaga teaches in column 5, line 60 though column 6, line 6, and in column 7, lines 45-59, and in column 12, lines 18-25, and in FIG. 2, Sheet 2 of 9, and in FIG. 5, Sheet 5 of 9, a H.323 protocol portion (item 33, FIG. 2), a CODEC (item 34, FIG. 2), and a call control portion (item 31, FIG. 2), that operate where a transmission format to be used in accordance with each user information of a calling side is registered as a circuit, and a CODEC to be used in accordance with each user information of the calling side is registered as the CODEC, and if the user information of a calling side is accompanied by ON flag in the target parameter setting table, the reference table of the user information of the calling side and communication method is looked up, so that the transmission format to be used as the communication method is decided, and a request of setup is propagated to opposite site of the intended connection (item #311, FIG. 5)

based on selection of CODEC and format (a transmitting device for transmitting a format type information which is determined by a determining section to an OVPN terminating device). It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the invention of the '692 reference with the invention of Morinaga since Morinaga teaches a system that involves storing user information and transmission parameters for use in efficient connection setup.

In regards to Claim 69/49, as discussed in the rejection of Claim 49, the ‘692 reference in view of Miyabe and Oguchi teaches an OVPN terminating device.

The ‘692 reference teaches in paragraph [0005], page 2, lines 40-43, 48-49 and 52-55, an optical transport network is intended to be a multi-service network that supports a wide variety of layers including SDH STM-N, SONET, ATM, IP, as well as other formats, to provide a universal transport medium for high bandwidth services, where client signals are mapped into the payload area of a frame structure called an optical transport unit (OUT), and where the payload to be carried fro the client, i.e. the client signal, which may be ATM, SDH, STM-N, or IP, is mapped into an optical payload unit (OPU), and, in paragraph [0019], page 5, lines 50-55, and in Fig. 1, page 18, a node N1 (Fig. 1), a node SNA (Fig. 1), a node SNB (Fig. 1), and a node N1 (Fig. 1) at the edges a conventional SDH network (an optical communication network).

In regards to Claims 76/18, and 76/53, as discussed in the rejections of Claims 18 and 53, the ‘692 reference in view of Miyabe and Oguchi teaches a base point device.

The ‘692 reference teaches in paragraph [0005], page 2, lines 40-43, 48-49 and 52-55, an optical transport network is intended to be a multi-service network that supports a wide variety of layers including SDH STM-N, SONET, ATM, IP, as well as other formats, to provide a universal transport medium for high bandwidth services, where client signals are mapped into the payload area of a frame structure called an optical transport unit (OUT), and where the payload to be carried fro the client, i.e. the client signal, which may be ATM, SDH, STM-N, or IP, is mapped into an optical payload unit (OPU), and, in paragraph [0019], page 5, lines 50-55, and in Fig. 1, page 18, a node N1 (Fig. 1), a node SNA (Fig. 1), a node SNB (Fig. 1), and a node N1 (Fig. 1) at the edges a conventional SDH network (an optical communication network).

Claim 51 is rejected under 35 U.S.C. 103(a) as being unpatentable over the ‘692 reference in view of Morinaga, French, and further in view of Newell.

In regards to Claim 51, as discussed in the rejection of Claim 50, the ‘692 reference in view of Morinaga and French teaches a receiving and retrieving section, an alternate converting section, a first signal format type information which is employed by a user’s device according to a control channel after a final connection confirmation is transmitted.

The ‘692 reference fails to teach retrieving whether or not there is a converting section for performing an operation, and a retrieving result indicating there is a section for performing an operation, a registering section for registering an IP address and a VPNID which are allocated to a user’s device

Newell teaches in column 4, lines 11-27, devices exchange information concerning which protocol feature teaches does or does not support (retrieving whether or not there is a converting section for performing an operation, and a retrieving result indicating there is a section for performing an operation). It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the invention of the '692 reference with the invention of Newell since Newell provides a method in which devices in a network can inform other devices of network capabilities, allowing devices to make appropriate decision when routing requests, allowing the system of the '692 reference to performing routing based on the capabilities of other devices.

French teaches in paragraphs [0227] and [0275], assigned VPN IDs are stored as updated information within network objects, and a VPN creator ensures unique VPN IDs are created such that duplicate addresses can exist within a VPN that has an assigned VPN ID, and a server generates an IP address on behalf of its client (a registering section for registering an IP address and a VPNID which are allocated to a user’s device). It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the invention of the '692 reference with the invention of French since French provides a system of maintaining and updating VPN IDs for IP addresses within virtual private networks, allowing the optical network of the '692

reference to provide optical VPN services to customers and provide the privacy, robustness, and cost effectiveness of virtual private networks.

Claim 55 is rejected under 35 U.S.C. 103(a) as being unpatentable over the ‘692 reference in view of Morinaga, French, and further in view of Tosey.

In regards to Claim 55, as discussed in the rejection of Claim 53, the ‘692 reference in view of Morinaga and French teaches a base point device.

The ‘692 reference fails to teach a separating section for separating a user’s device and a network, and a returning section for returning a test beam which is transmitted from a network.

Tosey teaches in column 7, lines 14-17 and 29-31, and in FIG. 2, Sheet 2 of 11, a network computing device (item 21, FIG. 2) that is part of a network of other network devices, and this network is separated from a WAN of users by a router (item 24, FIG. 2), and where the network computing device (item 21, FIG. 2) executes a link test to a peer network device, such as the router (item 24, FIG. 2), and setermines if a peer network device has returned a response (a separating section for separating a user’s device and a network, and a returning section for returning a test beam which is transmitted from a network). It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the invention of the '692 reference with the invention of Tosey since Tosey provides a method of testing connections of a network device to other network devices, including devices that connect it to another network and its users, and where the device being tested can respond to confirm connectivity,

including connectivity to a network of users, allowing the system of the '692 reference to detect network failures and respond by developing paths to avoid them and reestablish connectivity.

Claims 58, 59, 64, 65, 66/59, 69/59 and 76/58 are rejected under 35 U.S.C. 103(a) as being unpatentable over the ‘692 reference in view of Miyabe (Patent No.: US 7,024,113 B2) (hereafter referred to as Miyabe) and Oguchi.

In regards to Claims 58, 59 and 66/59, the ‘692 reference teaches in paragraph [0005], page 2, lines 40-43, 48-49 and 52-55, an optical transport network is intended to be a multi-service network that supports a wide variety of layers including SDH STM-N, SONET, ATM, IP, as well as other formats, to provide a universal transport medium for high bandwidth services, where client signals are mapped into the payload area of a frame structure called an optical transport unit (OUT), and where the payload to be carried fro the client, i.e. the client signal, which may be ATM, SDH, STM-N, or IP, is mapped into an optical payload unit (OPU), and, in paragraph [0019], page 5, lines 50-55, and in Fig. 1, page 18, a node N1 (Fig. 1), a node SNA (Fig. 1), a node SNB (Fig. 1), and a node N1 (Fig. 1) at the edges a conventional SDH network (optical network, and a plurality of converting sections, which are disposed so as to correspond to plural different first signal formats, for converting a first signal format and a second signal format alternatively under conditions in which the first signal format is used by a user’s device and a second signal format which is used in the network are different from each other, a transmitting section for transmitting a first signal format which is transmitted

from a user's device to an optical network by encapsulating a first signal format by a second signal format, and a transmitting section for transmitting an encapsulated signal which is encapsulated by a second signal format which is transmitted from an optical network to a user's device by de-encapsulating to a first signal format, and a terminating device for containing the user's device, and a transmitting section for transmitting a plurality of optical wavelength signals to an optical network).

The '692 reference fails to teach a multiplying and transmitting section for multiplying and transmitting a plurality of optical wavelength signals which are used in a user's device to an optical network, a separating and transmitting section for separating and transmitting multiplied optical wavelength signals which arrive from an optical network, and separating and transmitting a multiplied optical wavelength signals which arrive form a base point device so as to transmit to a predetermined course according to information which is notified from a notifying section, a notifying section for notifying an optical network of information for a wavelength which are transmitted under a multiplied condition so as to be used in a plurality of devices, and VPN.

Miyabe teaches in column 19, lines 44-52, and in column 12, line 63 through column 13, line 8, and in FIG. 19, Sheet 19 of 28, and in FIG. 24, Sheet 23 of 28, a wavelength multiplexer (item 9, FIG. 19) on an output side of an optical switch (a multiplying and transmitting section for multiplying and transmitting a plurality of optical wavelength signals which are used in a user's device to an optical network).

Miyabe also teaches in column 19, lines 44-52, and in column 12, line 63 through column 13, line 8, and in FIG. 19, Sheet 19 of 28, and in FIG. 24, Sheet 23 of 28, a

wavelength demultiplexer (item 7, FIG. 19) on an input side of an optical switch which can receive signals from intermediate network devices (a separating and transmitting section for separating and transmitting multiplied optical wavelength signals which arrive from an optical network, and separating and transmitting a multiplied optical wavelength signals which arrive from a base point device so as to transmit to a predetermined course according to information which is notified from a notifying section).

Miyabe also teaches in column 19, lines 44-52, and in column 12, line 63 through column 13, line 8, and in FIG. 19, Sheet 19 of 28, and in FIG. 24, Sheet 23 of 28, a an OXC5 (OPTICAL XC5, FIG. 24) transmits to OXC4 (OPTICAL XC4, FIG. 24), a wavelength notification message indicating a wavelength has been reserved for a new route, where the wavelength notification message includes a path identifier and a wavelength value for notification, and upon receipt of this message, OXC4 stores the wavelength value into a table entry corresponding to a path identifier of the new route in a wavelength management table (item 60, FIG. 19), where the entire content of the wavelength management table become to have effective values and the contents are reflected to an optical switch (a notifying section for notifying an optical network of information for a wavelength which are transmitted under a multiplied condition so as to be used in a plurality of devices). It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the invention of the '692 reference with the invention of Miyabe since Miyabe provides a system that details the reception, transmission, and processing of wavelength signals in an optical network and how to update routing information to devices on such a network, and can be incorporated the

system of the '692 reference to provide prompt management table updates utilizing wavelength division components.

Oguchi teaches in paragraph [0065], [0067], [0083], [0085], and [0143], virtual routers having the same VPN-ID exchange routing information though a level-2 tunnel established between edge routers, which can involves a host having an IP address, and then generate routing tables for that VPN-ID (VPN). It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the invention of the '692 reference with the invention of Oguchi since Oguchi provides a method of establishing a virtual network and distributing the necessary information to establish and maintain such a virtual network, allowing the optical network of the '692 reference to provide optical VPN services to customers and provide the privacy, robustness, and cost effectiveness of virtual private networks.

In regards to Claims 64 and 65, the ‘692 reference teaches in paragraph [0005], page 2, lines 40-43, 48-49 and 52-55, an optical transport network is intended to be a multi-service network that supports a wide variety of layers including SDH STM-N, SONET, ATM, IP, as well as other formats, to provide a universal transport medium for high bandwidth services, where client signals are mapped into the payload area of a frame structure called an optical transport unit (OUT), and where the payload to be carried fro the client, i.e. the client signal, which may be ATM, SDH, STM-N, or IP, is mapped into an optical payload unit (OPU), and, in paragraph [0019], page 5, lines 50-55, and in Fig. 1, page 18, a node N1 (Fig. 1), a node SNA (Fig. 1), a node SNB (Fig.

1), and a node N1 (Fig. 1) at the edges a conventional SDH network (optical network, and a plurality of converting sections, which are disposed so as to correspond to plural different first signal formats, for converting a first signal format and a second signal format alternatively under conditions in which the first signal format is used by a user's device and a second signal format which is used in the network are different from each other, a transmitting section for transmitting a first signal format which is transmitted from a user's device to an optical network by encapsulating a first signal format by a second signal format, and a terminating device for containing the user's device).

The '692 reference fails to teach converting a series of serial signals into a plurality of parallel signals and covering a plurality of parallel signals into a series of serial signals, and VPN.

Miyabe teaches in column 19, lines 44-52, and in column 12, line 63 through column 13, line 8, and in FIG. 19, Sheet 19 of 28, and in FIG. 24, Sheet 23 of 28, a wavelength multiplexer (item 9, FIG. 19) on an output side of an optical switch, and a wavelength demultiplexer (item 7, FIG. 19) on an input side of an optical switch which can receive signals from intermediate network devices (converting a series of serial signals into a plurality of parallel signals and covering a plurality of parallel signals into a series of serial signals). It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the invention of the '692 reference with the invention of Miyabe since Miyabe provides a system that details the reception, transmission, and processing of wavelength signals in an optical network and how to update routing information to devices on such a network, and can be incorporated the

system of the '692 reference to provide prompt management table updates utilizing wavelength division components.

Oguchi teaches in paragraph [0065], [0067], [0083], [0085], and [0143], virtual routers having the same VPN-ID exchange routing information though a level-2 tunnel established between edge routers, which can involves a host having an IP address, and then generate routing tables for that VPN-ID (VPN). It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the invention of the '692 reference with the invention of Oguchi since Oguchi provides a method of establishing a virtual network and distributing the necessary information to establish and maintain such a virtual network, allowing the optical network of the '692 reference to provide optical VPN services to customers and provide the privacy, robustness, and cost effectiveness of virtual private networks.

In regards to Claim 69/59, as discussed in the rejection of Claim 59, the ‘692 reference in view of Miyabe and Oguchi teaches an OVPN terminating device.

The ‘692 reference teaches in paragraph [0005], page 2, lines 40-43, 48-49 and 52-55, an optical transport network is intended to be a multi-service network that supports a wide variety of layers including SDH STM-N, SONET, ATM, IP, as well as other formats, to provide a universal transport medium for high bandwidth services, where client signals are mapped into the payload area of a frame structure called an optical transport unit (OUT), and where the payload to be carried fro the client, i.e. the client signal, which may be ATM, SDH, STM-N, or IP, is mapped into an optical payload

unit (OPU), and, in paragraph [0019], page 5, lines 50-55, and in Fig. 1, page 18, a node N1 (Fig. 1), a node SNA (Fig. 1), a node SNB (Fig. 1), and a node N1 (Fig. 1) at the edges a conventional SDH network (an optical communication network).

In regards to Claims 76/58, as discussed in the rejections of Claim 58, the '692 reference in view of Miyabe and Oguchi teaches a base point device.

The '692 reference teaches in paragraph [0005], page 2, lines 40-43, 48-49 and 52-55, an optical transport network is intended to be a multi-service network that supports a wide variety of layers including SDH STM-N, SONET, ATM, IP, as well as other formats, to provide a universal transport medium for high bandwidth services, where client signals are mapped into the payload area of a frame structure called an optical transport unit (OUT), and where the payload to be carried fro the client, i.e. the client signal, which may be ATM, SDH, STM-N, or IP, is mapped into an optical payload unit (OPU), and, in paragraph [0019], page 5, lines 50-55, and in Fig. 1, page 18, a node N1 (Fig. 1), a node SNA (Fig. 1), a node SNB (Fig. 1), and a node N1 (Fig. 1) at the edges a conventional SDH network (an optical communication network).

Claims 60-63, 66/61 and 63/63 are rejected under 35 U.S.C. 103(a) as being unpatentable over the '692 reference in view of Miyabe, Miller et al. (Patent No.: US 6,212,568 B1) (hereafter referred to as Miller), and Oguchi.

In regards to Claim 60, the '692 reference teaches in paragraph [0005], page 2, lines 40-43, 48-49 and 52-55, an optical transport network is intended to be a multi-

service network that supports a wide variety of layers including SDH STM-N, SONET, ATM, IP, as well as other formats, to provide a universal transport medium for high bandwidth services, where client signals are mapped into the payload area of a frame structure called an optical transport unit (OUT), and where the payload to be carried fro the client, i.e. the client signal, which may be ATM, SDH, STM-N, or IP, is mapped into an optical payload unit (OPU), and, in paragraph [0019], page 5, lines 50-55, and in Fig. 1, page 18, a node N1 (Fig. 1), a node SNA (Fig. 1), a node SNB (Fig. 1), and a node N1 (Fig. 1) at the edges a conventional SDH network (optical network, and a plurality of converting sections, which are disposed so as to correspond to plural different first signal formats, for converting a first signal format and a second signal format alternatively under conditions in which the first signal format is used by a user's device and a second signal format which is used in the network are different from each other, a transmitting section for transmitting a first signal format which is transmitted from a user's device to an optical network by encapsulating a first signal format by a second signal format, and a transmitting section for transmitting an encapsulated signal which is encapsulated by a second signal format which is transmitted from an optical network to a user's device by de-encapsulating to a first signal format, and a terminating device for containing the user's device, and a transmitting section for transmitting a plurality of optical wavelength signals to an optical network).

The '692 reference fails to teach a converting and transmitting section for converting a serial signal which is transmitted from a user's device into a plurality of parallel signals so as to transmit to a network, a converting and transmitting section for

converting a plurality of parallel signals which arrive from a network to a serial signal so as to transmit to a user's device a notifying section for notifying that information for a topology of parallel signals and information that the serial signals are converted to parallel signals, and VPN.

Miyabe teaches in column 19, lines 44-52, and in column 12, line 63 through column 13, line 8, and in FIG. 19, Sheet 19 of 28, and in FIG. 24, Sheet 23 of 28, a wavelength demultiplexer (item 7, FIG. 19) on an input side of an optical switch which can receive signals from intermediate network devices (a converting and transmitting section for converting a serial signal which is transmitted from a user's device into a plurality of parallel signals so as to transmit to a network).

Miyabe also teaches in column 19, lines 44-52, and in column 12, line 63 through column 13, line 8, and in FIG. 19, Sheet 19 of 28, and in FIG. 24, Sheet 23 of 28, a wavelength multiplexer (item 9, FIG. 19) on an output side of an optical switch (a converting and transmitting section for converting a plurality of parallel signals which arrive from a network to a serial signal so as to transmit to a user's device). It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the invention of the '692 reference with the invention of Miyabe since Miyabe provides a system that details the reception, transmission, and processing of wavelength signals in an optical network and how to update routing information to devices on such a network, and can be incorporated the system of the '692 reference to provide prompt management table updates utilizing wavelength division components.

Miller teaches in column 11, lines 4-11, a frame includes a frames-follow flag which indicates that multiple frames together comprise a “super frame” (a notifying section for notifying that information for a topology of parallel signals and information that the serial signals are converted to parallel signals). It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the invention of the '692 reference with the invention of Miller since Miller provides a method of conveying how information has been arranged, allowing quicker processing of data units since more detailed information is provided to devices that receive the encapsulated data unit in the system of the '692 reference.

Oguchi teaches in paragraph [0065], [0067], [0083], [0085], and [0143], virtual routers having the same VPN-ID exchange routing information though a level-2 tunnel established between edge routers, which can involves a host having an IP address, and then generate routing tables for that VPN-ID (VPN). It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the invention of the '692 reference with the invention of Oguchi since Oguchi provides a method of establishing a virtual network and distributing the necessary information to establish and maintain such a virtual network, allowing the optical network of the '692 reference to provide optical VPN services to customers and provide the privacy, robustness, and cost effectiveness of virtual private networks.

In regards to Claim 61, as discussed in the rejection of Claim 60, the ‘692 reference in view of Miyabe, Miller, and Oguchi teaches an optical network, and a

plurality of converting sections, which are disposed so as to correspond to plural different first signal formats, for converting a first signal format and a second signal format alternatively under conditions in which the first signal format is used by a user's device and a second signal format which is used in the network are different from each other, and a terminating device for containing the user's device and information which is notified from a notifying section.

The '692 reference fails to teach an inputting section for inputting parallel signals which are divided from a series of serial signals.

Miyabe further teaches in column 19, lines 44-52, and in column 12, line 63 through column 13, line 8, and in FIG. 19, Sheet 19 of 28, and in FIG. 24, Sheet 23 of 28, a wavelength multiplexer (item 9, FIG. 19) on an output side of an optical switch (an inputting section for inputting parallel signals which are divided from a series of serial signals). It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the invention of the '692 reference with the invention of Miyabe since Miyabe provides a system that details the reception, transmission, and processing of wavelength signals in an optical network and how to update routing information to devices on such a network, and can be incorporated the system of the '692 reference to provide prompt management table updates utilizing wavelength division components.

In regards to Claims 62 and 63, the '692 reference teaches in paragraph [0005], page 2, lines 40-43, 48-49 and 52-55, an optical transport network is intended to be a multi-service network that supports a wide variety of layers including SDH STM-N,

SONET, ATM, IP, as well as other formats, to provide a universal transport medium for high bandwidth services, where client signals are mapped into the payload area of a frame structure called an optical transport unit (OUT), and where the payload to be carried fro the client, i.e. the client signal, which may be ATM, SDH, STM-N, or IP, is mapped into an optical payload unit (OPU), and, in paragraph [0019], page 5, lines 50-55, and in Fig. 1, page 18, a node N1 (Fig. 1), a node SNA (Fig. 1), a node SNB (Fig. 1), and a node N1 (Fig. 1) at the edges a conventional SDH network (optical network, and a plurality of converting sections, which are disposed so as to correspond to plural different first signal formats, for converting a first signal format and a second signal format alternatively under conditions in which the first signal format is used by a user's device and a second signal format which is used in the network are different from each other, and a terminating device for containing the user's device,).

The '692 reference fails to teach a multiplying and transmitting section for multiplying a parallel signal which is converted from a serial signal to transmit to a network, a separating and transmitting section for separating multiplied wavelength signals which arrive from a network into parallel signals and converting parallel signals into serial signals so as to transmit to a device, information that signals are transmitted under wavelength-multiplied condition, a notifying section for notifying that information for a topology of parallel signals, and VPN.

Miyabe teaches in column 19, lines 44-52, and in column 12, line 63 through column 13, line 8, and in FIG. 19, Sheet 19 of 28, and in FIG. 24, Sheet 23 of 28, a wavelength multiplexer (item 9, FIG. 19) on an output side of an optical switch (a

multiplying and transmitting section for multiplying a parallel signal which is converted from a serial signal to transmit to a network).

Miyabe also teaches in column 19, lines 44-52, and in column 12, line 63 through column 13, line 8, and in FIG. 19, Sheet 19 of 28, and in FIG. 24, Sheet 23 of 28, a wavelength demultiplexer (item 7, FIG. 19) on an input side of an optical switch which can receive signals from intermediate network devices (a separating and transmitting section for separating multiplied wavelength signals which arrive from a network into parallel signals and converting parallel signals into serial signals so as to transmit to a device).

Miyabe also teaches in column 19, lines 44-52, and in column 12, line 63 through column 13, line 8, and in FIG. 19, Sheet 19 of 28, and in FIG. 24, Sheet 23 of 28, a an OXC5 (OPTICAL XC5, FIG. 24) transmits to OXC4 (OPTICAL XC4, FIG. 24), a wavelength notification message indicating a wavelength has been reserved for a new route, where the wavelength notification message includes a path identifier and a wavelength value for notification, and upon receipt of this message, OXC4 stores the wavelength value into a table entry corresponding to a path identifier of the new route in a wavelength management table (item 60, FIG. 19), where the entire content of the wavelength management table become to have effective values and the contents are reflected to an optical switch (information that signals are transmitted under wavelength-multiplied condition). It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the invention of the '692 reference with the invention of Miyabe since Miyabe provides a system that details the reception, transmission, and

processing of wavelength signals in an optical network and how to update routing information to devices on such a network, and can be incorporated the system of the '692 reference to provide prompt management table updates utilizing wavelength division components.

Miller teaches in column 11, lines 4-11, a frame includes a frames-follow flag which indicates that multiple frames together comprise a “super frame” (a notifying section for notifying that information for a topology of parallel signals). It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the invention of the '692 reference with the invention of Miller since Miller provides a method of conveying how information has been arranged, allowing quicker processing of data units since more detailed information is provided to devices that receive the encapsulated data unit in the system of the '692 reference.

Oguchi teaches in paragraph [0065], [0067], [0083], [0085], and [0143], virtual routers having the same VPN-ID exchange routing information though a level-2 tunnel established between edge routers, which can involves a host having an IP address, and then generate routing tables for that VPN-ID (VPN). It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the invention of the '692 reference with the invention of Oguchi since Oguchi provides a method of establishing a virtual network and distributing the necessary information to establish and maintain such a virtual network, allowing the optical network of the '692 reference to provide optical VPN services to customers and provide the privacy, robustness, and cost effectiveness of virtual private networks.

In regards to Claims 66/61 and 66/63, the ‘692 reference teaches in paragraph [0005], page 2, lines 40-43, 48-49 and 52-55, an optical transport network is intended to be a multi-service network that supports a wide variety of layers including SDH STM-N, SONET, ATM, IP, as well as other formats, to provide a universal transport medium for high bandwidth services, where client signals are mapped into the payload area of a frame structure called an optical transport unit (OUT), and where the payload to be carried fro the client, i.e. the client signal, which may be ATM, SDH, STM-N, or IP, is mapped into an optical payload unit (OPU), and, in paragraph [0019], page 5, lines 50-55, and in Fig. 1, page 18, a node N1 (Fig. 1), a node SNA (Fig. 1), a node SNB (Fig. 1), and a node N1 (Fig. 1) at the edges a conventional SDH network (optical network, and a plurality of converting sections, which are disposed so as to correspond to plural different first signal formats, for converting a first signal format and a second signal format alternatively under conditions in which the first signal format is used by a user’s device and a second signal format which is used in the network are different from each other, a transmitting section for transmitting a first signal format which is transmitted from a user’s device to an optical network by encapsulating a first signal format by a second signal format, and a transmitting section for transmitting an encapsulated signal which is encapsulated by a second signal format which is transmitted from an optical network to a user’s device by de-encapsulating to a first signal format, and a terminating device for containing the user’s device, and a transmitting section for transmitting a plurality of optical wavelength signals to an optical network).

The ‘692 reference fails to teach a multiplying and transmitting section for multiplying and transmitting a plurality of optical wavelength signals which are used in a user’s device to an optical network, a separating and transmitting section for separating and transmitting multiplied optical wavelength signals which arrive from an optical network, and separating and transmitting a multiplied optical wavelength signals which arrive form a base point device so as to transmit to a predetermined course according to information which is notified from a notifying section, a notifying section for notifying an optical network of information for a wavelength which are transmitted under a multiplied condition so as to be used in a plurality of devices, and VPN.

Miyabe teaches in column 19, lines 44-52, and in column 12, line 63 through column 13, line 8, and in FIG. 19, Sheet 19 of 28, and in FIG. 24, Sheet 23 of 28, a wavelength multiplexer (item 9, FIG. 19) on an output side of an optical switch (a multiplying and transmitting section for multiplying and transmitting a plurality of optical wavelength signals which are used in a user’s device to an optical network).

Miyabe also teaches in column 19, lines 44-52, and in column 12, line 63 through column 13, line 8, and in FIG. 19, Sheet 19 of 28, and in FIG. 24, Sheet 23 of 28, a wavelength demultiplexer (item 7, FIG. 19) on an input side of an optical switch which can receive signals from intermediate network devices (a separating and transmitting section for separating and transmitting multiplied optical wavelength signals which arrive from an optical network, and separating and transmitting a multiplied optical wavelength signals which arrive from a base point device so as to transmit to a predetermined course according to information which is notified from a notifying section).

Miyabe also teaches in column 19, lines 44-52, and in column 12, line 63 through column 13, line 8, and in FIG. 19, Sheet 19 of 28, and in FIG. 24, Sheet 23 of 28, a an OXC5 (OPTICAL XC5, FIG. 24) transmits to OXC4 (OPTICAL XC4, FIG. 24), a wavelength notification message indicating a wavelength has been reserved for a new route, where the wavelength notification message includes a path identifier and a wavelength value for notification, and upon receipt of this message, OXC4 stores the wavelength value into a table entry corresponding to a path identifier of the new route in a wavelength management table (item 60, FIG. 19), where the entire content of the wavelength management table become to have effective values and the contents are reflected to an optical switch (a notifying section for notifying an optical network of information for a wavelength which are transmitted under a multiplied condition so as to be used in a plurality of devices). It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the invention of the '692 reference with the invention of Miyabe since Miyabe provides a system that details the reception, transmission, and processing of wavelength signals in an optical network and how to update routing information to devices on such a network, and can be incorporated the system of the '692 reference to provide prompt management table updates utilizing wavelength division components.

Oguchi teaches in paragraph [0065], [0067], [0083], [0085], and [0143], virtual routers having the same VPN-ID exchange routing information though a level-2 tunnel established between edge routers, which can involves a host having an IP address, and then generate routing tables for that VPN-ID (VPN). It would have been obvious to one

of ordinary skill in the art at the time of the invention to combine the invention of the '692 reference with the invention of Oguchi since Oguchi provides a method of establishing a virtual network and distributing the necessary information to establish and maintain such a virtual network, allowing the optical network of the '692 reference to provide optical VPN services to customers and provide the privacy, robustness, and cost effectiveness of virtual private networks.

Claim 67/58 is rejected under 35 U.S.C. 103(a) as being unpatentable over the ‘692 reference in view of Miyabe, Oguchi, and further in view of Tosey et al. (Patent No.: US 6,392,990 B1), hereafter refereed to as Tosey.

In regards to Claim 67/58, as discussed in the rejection of Claim 58, the ‘692 reference in view of Miyabe and Oguchi teaches a user’s device and an OVPN.

The ‘692 reference fails to teach a separating section for separating a user’s device and a network, and a returning section for returning a test beam which is transmitted from a network.

Tosey teaches in column 7, lines 14-17 and 29-31, and in FIG. 2, Sheet 2 of 11, a network computing device (item 21, FIG. 2) that is part of a network of other network devices, and this network is separated from a WAN of users by a router (item 24, FIG. 2), and where the network computing device (item 21, FIG. 2) executes a link test to a peer network device, such as the router (item 24, FIG. 2), and determines if a peer network device has returned a response (a separating section for separating a user’s device and a network, and a returning section for returning a test beam which is

transmitted from a network). It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the invention of the '692 reference with the invention of Tosey since Tosey provides a method of testing connections of a network device to other network devices, including devices that connect it to another network and its users, and where the device being tested can respond to confirm connectivity, including connectivity to a network of users, allowing the system of the '692 reference to detect network failures and respond by developing paths to avoid them and reestablish connectivity.

Claims 67/60 and 67/62 are rejected under 35 U.S.C. 103(a) as being unpatentable over the ‘692 reference in view of Miyabe, Miller, Oguchi, and further in view of Tosey et al. (Patent No.: US 6,392,990 B1), hereafter refereed to as Tosey.

In regards to Claim 67/60, as discussed in the rejection of Claim 60, the ‘692 reference in view of Miyabe, Miller, and Oguchi teaches a user’s device and an OVPN.

The ‘692 reference fails to teach a separating section for separating a user’s device and a network, and a returning section for returning a test beam which is transmitted from a network.

Tosey teaches in column 7, lines 14-17 and 29-31, and in FIG. 2, Sheet 2 of 11, a network computing device (item 21, FIG. 2) that is part of a network of other network devices, and this network is separated from a WAN of users by a router (item 24, FIG. 2), and where the network computing device (item 21, FIG. 2) executes a link test to a peer network device, such as the router (item 24, FIG. 2), and determines if a peer

network device has returned a response (a separating section for separating a user's device and a network, and a returning section for returning a test beam which is transmitted from a network). It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the invention of the '692 reference with the invention of Tosey since Tosey provides a method of testing connections of a network device to other network devices, including devices that connect it to another network and its users, and where the device being tested can respond to confirm connectivity, including connectivity to a network of users, allowing the system of the '692 reference to detect network failures and respond by developing paths to avoid them and reestablish connectivity.

Allowable Subject Matter

Claims 5, 6, 7/6, 27, 28, 29, 30, 31, 69/27 and 76/30 are allowed.

Claim 20 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action.

Response to Arguments

Applicants' arguments filed 05/26/2009 have been fully considered but they are not persuasive. Applicants submit that Oguchi fails to mention the claimed registered contents other than the IP address and the VPNID (i.e., the first signal format type used in the user's device), let alone disclose or suggest the technical idea of exchanging such

a signal format type, and one having ordinary skill in the art would not have been conceived to notify another device (e.g., a device at a destination/reception side) of such information unless specific reasons exist. Examiner respectfully disagrees this is sufficient for the withdrawal of the rejection of Applicants' claims. As discussed in the rejections of Claims 1 and 2, the '692 reference in view of Morinaga teaches a first signal format type used in a user's device, and a person of ordinary skill in the art at the time of the invention would realize that an exchange of information that is utilized in the system of Oguchi could be employed to exchange format information as taught by the '692 reference in view of Morinaga along with IP address and VPNID information, and where such an exchange of format information would ensure widespread and rapid distribution of format information and allow faster response times in connection establishment, and such an exchange of format information would also allow a network manager to rapidly collect and view how formats are distributed through a network and allow network optimization in response to how different format are used through a network.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JOSHUA SMITH whose telephone number is (571)270-1826. The examiner can normally be reached on Monday-Friday, 10:30am-7pm, EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chirag Shah can be reached on (571)272-3144. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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31 July 2009

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